

Appl. No.: 09/982,481
Amdt. dated October 3, 2003
Reply to Office action of August 27, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method for arranging data, said method comprising:

- A.
- a) —receiving said data comprising a plurality of records, each said record having a plurality of attributes;
 - b) —determining a set of attributes selected from said plurality of attributes, said set of attributes for placement of said plurality of records in a graphically displayable array, said graphically displayable array comprising a plurality of adjacent data points, each said data point representing one record of said plurality of records;
 - c) —arranging said plurality of records to construct said graphically displayable array ~~for presenting said data in a format for detecting relationships between said plurality of records so that each of said adjacent data points is assigned a record.~~

2. (Original) A method as recited in Claim 1 wherein said set of attributes comprises:

- at least one dividing attribute,
- a first ordering attribute corresponding to a first axis,
- a second ordering attribute corresponding to a second axis, and
- a visual indicator attribute corresponding to a visual indicator.

3. (Currently amended) A method as recited in Claim 2 wherein arranging said plurality of records ~~said step c)~~ comprises sorting said plurality of records by a first dividing attribute, said first dividing attribute corresponding to said first axis,

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and partitioning said plurality of records into groups according to said first dividing attribute;

4. (Currently amended) A method as recited in Claim 3 wherein arranging said plurality of records ~~said step c)~~ further comprises:

sorting said records of each said group according to said first ordering attribute and said second ordering attribute; and
applying said visual indicator to each of said plurality of records according to said visual indicator attribute.

5. (Currently amended) A method as recited in Claim 3 wherein arranging said plurality of records ~~said step c)~~ further comprises:

sorting said records of each of said groups according to a second dividing attribute, said second dividing attribute corresponding to said second axis, and partitioning said records of each of said groups into sub-groups according to said second dividing attribute;
sorting said records of each said sub-group according to said first ordering attribute and said second ordering attribute; and
applying said visual indicator to each of said plurality of records according to said visual indicator attribute.

6. (Original) A method as recited in Claim 1 wherein each said data point is represented by a pixel on a display.

7. (Original) A method as recited in Claim 2 wherein said first axis is a horizontal axis.

8. (Original) A method as recited in Claim 2 wherein said second axis is a vertical axis.

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9. (Original) A method as recited in Claim 2 wherein said visual indicator is a color.

10. (Original) A method as recited in Claim 1 wherein said graphically displayable array is a pixel bar chart.

11. (Currently amended) A computer system comprising:
a bus;
a display device coupled to said bus;
a computer-readable memory coupled to said bus; and
a processor coupled to said bus, said processor for executing a method for arranging data, said method comprising:

- A1
- a) —receiving said data comprising a plurality of records, each said record having a plurality of attributes;
 - b) —determining a set of attributes selected from said plurality of attributes, said set of attributes for placement of said plurality of records in a graphically displayable array, said graphically displayable array comprising a plurality of adjacent data points, each said data point representing one record of said plurality of records;
 - c) —arranging said plurality of records to construct said graphically displayable array ~~for presenting said data in a format for detecting relationships between said plurality of records so that each of said adjacent data points is assigned~~ a record.

12. (Original) A computer system as recited in Claim 11 wherein said set of attributes comprises:

- at least one dividing attribute,
- a first ordering attribute corresponding to a first axis,
- a second ordering attribute corresponding to a second axis, and

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a visual indicator attribute corresponding to a visual indicator.

13. (Currently amended) A computer system as recited in Claim 12 wherein arranging said plurality of records said step e) comprises sorting said plurality of records by a first dividing attribute, said first dividing attribute corresponding to said first axis, and partitioning said plurality of records into groups according to said first dividing attribute.

14. (Currently amended) A computer system as recited in Claim 13 wherein arranging said plurality of records said step e) further comprises:
 sorting said records of each said group according to said first ordering attribute and said second ordering attribute; and
 applying said visual indicator to each of said plurality of records according to said visual indicator attribute;

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15. (Currently amended) A computer system as recited in Claim 13 wherein arranging said plurality of records said step e) further comprises:
 sorting said records of each of said groups according to a second dividing attribute, said second dividing attribute corresponding to said second axis, and partitioning said records of each of said groups into sub-groups according to said second dividing attribute;
 sorting said records of each said sub-group according to said first ordering attribute and said second ordering attribute; and
 applying said visual indicator to each of said plurality of records according to said visual indicator attribute.

16. (Original) A computer system as recited in Claim 11 wherein each said data point is represented by a pixel on a display.

17. (Original) A computer system as recited in Claim 12 wherein said first axis is a horizontal axis.

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18. (Original) A computer system as recited in Claim 12 wherein said second axis is a vertical axis.

19. (Original) A computer system as recited in Claim 12 wherein said visual indicator is a color.

20. (Original) A computer system as recited in Claim 11 wherein said graphically displayable array is a pixel bar chart.

21. (Currently amended) A computer-readable medium having computer-readable program code embodied therein for causing a computer system to perform a method for arranging data, said method comprising:

- A1
- a) —receiving said data comprising a plurality of records, each said record having a plurality of attributes;
 - b) —determining a set of attributes selected from said plurality of attributes, said set of attributes for placement of said plurality of records in a graphically displayable array, said graphically displayable array comprising a plurality of adjacent data points, each said data point representing one record of said plurality of records;
 - c) —arranging said plurality of records to construct said graphically displayable array so that each of said adjacent data points is assigned a record for presenting said data in a format for detecting relationships between said plurality of records.

22. (Original) A computer-readable medium as recited in Claim 21 wherein said set of attributes comprises:

- at least one dividing attribute,
- a first ordering attribute corresponding to a first axis,
- a second ordering attribute corresponding to a second axis, and
- a visual indicator attribute corresponding to a visual indicator.

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23. (Currently amended) A computer-readable medium as recited in Claim 22 wherein arranging said plurality of records said step e) comprises sorting said plurality of records by a first dividing attribute, said first dividing attribute corresponding to said first axis, and partitioning said plurality of records into groups according to said first dividing attribute.

24. (Currently amended) A computer-readable medium as recited in Claim 23 wherein arranging said plurality of records said step e) further comprises:
 sorting said records of each said group according to said first ordering attribute and said second ordering attribute; and
 applying said visual indicator to each of said plurality of records according to said visual indicator attribute.

25. (Currently amended) A computer-readable medium as recited in Claim 23 wherein arranging said plurality of records said step e) further comprises:
 sorting said records of each of said groups according to a second dividing attribute, said second dividing attribute corresponding to said second axis, and partitioning said records of each of said groups into sub-groups according to said second dividing attribute;
 sorting said records of each said sub-group according to said first ordering attribute and said second ordering attribute; and
 applying said visual indicator to each of said plurality of records according to said visual indicator attribute.

26. (Original) A computer-readable medium as recited in Claim 21 wherein each said data point is represented by a pixel on a display.

27. (Original) A computer-readable medium as recited in Claim 22 wherein said first axis is a horizontal axis.

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28. (Original) A computer-readable medium as recited in Claim 22 wherein said second axis is a vertical axis.

29. (Original) A computer-readable medium as recited in Claim 22 wherein said visual indicator is a color.

30. (Original) A computer-readable medium as recited in Claim 21 wherein said graphically displayable array is a pixel bar chart.

31. (New) A computer-readable medium having computer-readable program code embodied therein that is adapted to cause a computer to implement a method to form a pixel bar chart comprising a plurality of columns, each column having a plurality of pixels, the method comprising:

determining a width of each of the columns, the width of some columns being different than the width of other columns;
assigning records to every pixel in said columns; and
applying a variable color to all of the pixels in all of the columns according to an attribute of said records.

32. (New) The computer-readable medium of claim 31 wherein said method further comprises:

forming a plurality of pixel bar charts, each cart comprising a plurality of variable width columns, each column containing a variable number of pixels;
assigning a record to a commonly located pixel in each chart; and
applying a variable color to the pixels in each chart according to an attribute of said records, said attribute being different among the charts.